## Fall 2011 Levee Maintenance Deficiency Summary Report Overall LMA & Unit Ratings, including DWR Erosion Survey

### San Joaquin River Basin

RD2031	Overall LMA	Total LMA		Threshold Perce		
Reclamation District No. 2031 Elliot	Rating	Miles		vever, U Rated M .MA Rating is M i		sent, so
	M *	13.19	the Overall L	INA Naurig is ivi i		
Data diltara	NA NASI	L L NATI	NA . ALL NATIO	Th In - I - I 0/	Encroachments PO Miles CO Miles	
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	PO Miles	CO Miles
Earthen Levee Vegetation	0.02		0.02	0.15%		
Trim / Thin Trees	0.62		0.62	4.70%		
Encroachments	0.02		0.02	0.08%	0.52	0.13
Animal Control	0.01	0.01	0.07	0.53%	0.52	0.13
Erosion / Bank Caving	0.03	0.01	0.07	0.53%		
		0.01				
Crown Surface / Depressions / Rutting	0.02	0.04	0.02	0.15%		
Seepage / Sandboils		0.01	0.04	0.30%		
Supplemental DWR Erosion Survey	0.04		0.04	0.30%		
LMA Totals:	0.04	0.03	0.89	6.75% *	0.52	0.13
EIVIA TOTAIS.	0.77	0.03	0.09	0.7570 **	0.52	0.13
Unit No. 01 Stanislaus River LB	Overall Unit	Total Unit				
	Rating	Miles				
RD2031	A	7.15			_	
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %		CO Miles
Earthen Levee	IVI IVIIIeS	U ivilles	IVI + 40 IVIIIeS	Threshold %	FO Willes	CO Miles
Vegetation	0.01		0.01	0.14%		
Trim / Thin Trees	0.01		0.01	0.14%	_	
Encroachments	0.01		0.01	0.14%	0.52	0.11
Erosion / Bank Caving	0.03		0.03	0.42%	0.02	0.11
Crown Surface / Depressions / Rutting	0.02		0.02	0.28%		
Supplemental	0.02		0.02	0.2070		
DWR Erosion Survey	0.04		0.04	0.56%		
Unit Totals:	0.12	0.00	0.12	1.68%	0.52	0.11
Unit No. 02 San Joaquin River RB	Overall Unit Rating	Total Unit Miles				
	M					
RD2031	IVI	6.04			Encrose	chments
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %		CO Miles
Earthen Levee						
Vegetation	0.01		0.01	0.17%		
Trim / Thin Trees	0.61		0.61	10.10%		
Encroachments						0.02
Animal Control	0.03	0.01	0.07	1.16%		
Erosion / Bank Caving		0.01	0.04	0.66%		
Seepage / Sandboils		0.01	0.04	0.66%		
Unit Totals:	0.65	0.03	0.77	12.75%	0.00	0.02

## **LMA District Cover Sheet**

### Fall 2011 Levee Inspection Results

## **Reclamation District No. 2031 Elliot**

	Spring (March - May)	Summer ** (June - August)	Fall (September - November)	Winter ** (December - February)							
* Overall LMA Rating (Fall Only)			М								
** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.											
* SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.  FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports.											
Comments											

### **Unit Cover Sheet**

### Fall 2011 Levee Inspection Results

## **Reclamation District No. 2031 Elliot**

	Waterway Bank Unit Miles												
	Unit No. 01 Sta	nislaus River		Left	7.15								
	Spring (March - May)	Summer (June - August)	(September - November) Fall		Winter ber - February)								
Unit Maintenance Rating (Fall Only)			Α										
Date of Inspection	5/10/2011 - 5/10/2011		10/26/2011 - 10/26/2011										
DWR Inspector	Jim Eto		Jim Eto										
Accompanied By	Bob Buckmaster		Bob Buckmaster										
	Billy Lyons												
Check one:													
<ul> <li>During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. We have found no changes in flood project conditions other than the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the enclosed report.</li> <li>During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. In addition to the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the report, we have found the following changes in flood project conditions.</li> <li>(In the comment section below or on additional sheet(s), identify change of condition by: Start to End Levee Mile or GPS coordinates, location (Land Side, Water Side, or Crown), Item identification, and description of the current condition).</li> </ul>													
Comments													
information must also be s	submitted. This Unit Cover She sheets by September 30 (Sum all of this information to:	eet should be signed ar	, Suite 200	tative an	nd returned to								
X	•												
Signature of LMA Repres	sentative		Date										

## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.15	10/26/2011 10/26/2011	Jim Eto

LMR	Levee	Mile	2.1		Rat Loca		GPS Latitude/Longitude	e Issue No.
No.	Start	End	Category	Item	Rating ** Location **	Action/Comment	Start End	Photo
1	0.00	0.07	Earthen Levee	Encroachments	WS PO	Fences Inspector Comments: Wooden and steel livestock fence and debris limit access to slope.	37.710001 ° 37.709871 -121.155391 ° -121.156568	
2	0.33	0.33	Earthen Levee	Trim / Thin Trees	WS C	Trim trees to at least five feet above ground level. Inspector Comments: Fallen tree limb onto crown.	37.706256 ° 37.706256 -121.157803 ° -121.157803	
3	0.35	0.46	Earthen Levee	Encroachments	WS PO	Fences	37.706098 ° 37.704697 -121.157916 ° -121.158914	
4	0.47	0.50	Supplemental	DWR Erosion Survey	WS M	Inspector Comments: 08/18/2011: No significant changes observed on site. Debris that blocks the irrigation outlet visible. 10/19/2010: No significant changes observed on site. Sloughing of the bank is occurring adjacent to an irrigation outlet structure. There is moderate to heavy vegetation along the bank that is well established. Broken chunks and slabs of concrete are used as rip rap and line the outside of the irrigation outlet structure. However, much of the rip rap along the slope is sloughing and could possibly lead to future slope instability.08/05/2010: Recommended as a local maintenance issue, per CLRO.08/20/2009: No major change observed since last visit; 1 inch fissure cracks developing on the slope; rip rap is showing signs of sloughing; recommend as local maintenance issue; site was previously rated "U".2008: No change from previous year; irrigation outlet located on site; rip rap placed on river bank.09/06/2007: Near agricultural diversion; only 3' landside height differential. [2011 Site ID:RD2031U01RM0.48]	37.704740 ° 37.704740 -121.159140 ° -121.159140	
5	0.52	0.52	Earthen Levee	Vegetation	WS M	Remove the wild growth other than native grasses from the levee slopes.	37.704050 ° 37.704050 -121.159578 ° -121.159578	
6	0.55	0.65	Earthen Levee	Encroachments	LS CO	Buildings Inspector Comments: Corrals and house on levee slope and crown.	37.703626 ° 37.702648 -121.159714 ° -121.160700	
7	0.64	0.71	Earthen Levee	Encroachments	LS PO	Fences	37.702814 ° 37.701875 -121.160562 ° -121.161670	
8	0.64	0.64	Earthen Levee	Crown Surface / Depressions / Rutting	CR M	Regrade the crown roadway for proper drainage.	37.702766 ° 37.702766 -121.160598 ° -121.160598	
9	0.75	0.78	Earthen Levee	Encroachments	LS PO	Agricultural Ditch	37.701566 ° 37.701178 -121.161852 ° -121.162086	
10	0.81	0.81	Earthen Levee	Encroachments	LS M	Pipe Inspector Comments: PVC pipe present and obstructing drain pipe.	37.700799 ° 37.700799 -121.162418 ° -121.162418	

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WS : Water Side CR : Crown

A : Acceptable
M : Minimally Acceptable
U : Unacceptable PO : Partially Obstructing CO : Completely Obstructing W : Watch/Monitor

N : Not Inspected, see Inspector Comment

## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.15	10/26/2011 10/26/2011	Jim Eto

LMR	Levee	Mile	Catagony	Item	Location	Rating	Action/Comment	GPS Latitud	de/Longitude	Issue No.
No.	Start	End	Category	пеш	tion	ng	Action/Comment	Start	End	Photo
11	0.89	0.89	Earthen Levee	Crown Surface / Depressions / Rutting	CR	M	Add appropriate gravel or road base. Grade and compact.	37.699980 ° -121.163368 °	37.699980 ° -121.163368 °	
12	1.27	1.27	Earthen Levee	Encroachments	WS	W	Pipe Inspector Comments: Irrigation intake pipe.	37.699536 ° -121.169924 °	37.699536 ° -121.169924 °	
13	1.27	1.27	Earthen Levee	Vegetation	WS	С	Remove the wild growth other than native grasses from the levee slopes. Inspector Comments: Improvements made.	37.699534 ° -121.169922 °	37.699534 ° -121.169922 °	
14	1.58	1.58	Earthen Levee	Erosion / Bank Caving	LS	M	Note and monitor erosion site. Inspector Comments: Erosion is active around the irrigation standpipe.	37.698776 ° -121.174327 °	37.698776 ° -121.174327 °	
15	1.60	1.60	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site. Inspector Comments: Active erosion is occurring around irrigation inlet.	37.698610 ° -121.174598 °	37.698610 ° -121.174598 °	
16	1.65	1.65	Earthen Levee	Erosion / Bank Caving	LS	M	Note and monitor erosion site. Inspector Comments: Active erosion around irrigation inlet in levee prism.	37.698208 ° -121.175400 °	37.698208 ° -121.175400 °	
17	2.35	2.35	Earthen Levee	Encroachments	LS	РО	Crops Inspector Comments: Turnouts for this field at levee slope.	37.689221 ° -121.178980 °	37.689221 ° -121.178980 °	
18	2.47	2.47	Earthen Levee	Encroachments	WS	W	Pipe	37.687953 ° -121.180244 °	37.687953 ° -121.180244 °	
19	3.11	3.11	Earthen Levee	Encroachments	WS	W	Pipe	37.688296 ° -121.190890 °	37.688296 ° -121.190890 °	
20	3.29	3.29	Earthen Levee	Encroachments	WS	W	Pipe Inspector Comments: Irrigation intake	37.690556 ° -121.192451 °	37.690556 ° -121.192451 °	
21	3.55	3.55	Earthen Levee	Encroachments	WS	W	Pipe Inspector Comments: Drain to channel	37.690864 ° -121.195990 °	37.690864 ° -121.195990 °	
22	3.64	3.64	Earthen Levee	Encroachments	WS	W	Pipe Inspector Comments: Irrigation intake.	37.690280 ° -121.197447 °	37.690280 ° -121.197447 °	
23	3.71	3.71	Earthen Levee	Encroachments	WS	W	Pipe Inspector Comments: Irrigation intake on waterside berm.	37.689783 ° -121.198562 °	37.689783 ° -121.198562 °	
24	3.72	3.72	Earthen Levee	Encroachments	WS	W	Pipe Inspector Comments: Irrigation intake	37.689742 ° -121.198695 °	37.689742 ° -121.198695 °	
25	3.73	3.73	Earthen Levee	Vegetation	LS	С	Remove the wild growth other than native grasses from the levee slopes.	37.689716 ° -121.198811 °	37.689716 ° -121.198811 °	
26	4.03	4.03	Earthen Levee	Encroachments	WS	W	Pipe Inspector Comments: Drainage outlet	37.690937 ° -121.203319 °	37.690937 ° -121.203319 °	

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WS : Water Side CR : Crown

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N : Not Inspected, see Inspector Comment

## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.15	10/26/2011 10/26/2011	Jim Eto

LMR	Levee	Mile	Cotomo	lt-o-re-	Location	Rating	A aking /Company	GPS Latitud	de/Longitude	Issue No.
No.	Start	End	Category	Item	ation	ing	Action/Comment	Start	End	Photo
27	4.39	4.43	Earthen Levee	Vegetation	LS	С	Remove the wild growth other than native grasses from the levee slopes.	37.686971 ° -121.207385 °	37.686585 ° -121.207802 °	32
28	4.45	4.45	Earthen Levee	Encroachments	WS	W	Pipe Inspector Comments: Two irrigation intakes	37.686376 ° -121.207935 °	37.686376 ° -121.207935 °	23
29	4.50	4.50	Earthen Levee	Trim / Thin Trees	WS	M	Inspector Comments: Fallen limb on waterside slope and crown.	37.685851 ° -121.208522 °	37.685851 ° -121.208522 °	10 Y
30	4.60	4.80	Earthen Levee	Encroachments	LS	РО	Landscaping Inspector Comments: Poplars and other landscaping at levee toe.	37.684474 ° -121.208447 °	37.682167 ° -121.209098 °	982
31	5.35	5.35	Earthen Levee	Encroachments	WS	СО	Landscaping Inspector Comments: Wild rose	37.678363 ° -121.217375 °	37.678363 ° -121.217375 °	25
32	5.41	5.41	Earthen Levee	Encroachments	LS	РО	Landscaping Inspector Comments: Wild Rose Bushes	37.677641 ° -121.217499 °	37.677641 ° -121.217499 °	983
33	5.68	5.68	Earthen Levee	Encroachments	LS	PO	Landscaping Inspector Comments: Mostly Willow	37.673718 ° -121.217609 °	37.673718 ° -121.217609 °	984
34	5.72	5.72	Earthen Levee	Encroachments	LS	РО	Landscaping Inspector Comments: Wild Rose bushes	37.673158 ° -121.217766 °		985
35	5.94	5.94	Earthen Levee	Encroachments	LS	W	Pipe Inspector Comments: MID installation	37.670341 ° -121.219224 °	37.670341 ° -121.219224 °	26
36	6.54	6.54	Earthen Levee	Vegetation	LS	С	Remove the wild growth other than native grasses from the levee slopes. Inspector Comments: Tall vegetation on landside toe and slope. Limited access due to fence and soft levee material.	37.667266 ° -121.228441 °	37.667266 ° -121.228441 °	33

\* Location LS: Land Side WS: Water Side CR: Crown \* Rating

A : Acceptable
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U : Unacceptable

PO : Partially Obstructing CO : Completely Obstructing W : Watch/Monitor N : Not Inspected, see Inspector Comment

## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.15	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	1	
Start Levee Mile	0.00	
End Levee Mile	0.07	
Location	Water Side	
Category	Earthen Levee	
Item	Encroachments	
Fall 2009 photo looking upstream at beginning of unit 1. Water side to the left.		

jeto\_f\_20110923\_118.jpg

Levee Mile Report Line	3
Start Levee Mile	0.35
End Levee Mile	0.46
Location	Water Side
Category	Earthen Levee
Item	Encroachments

05/10/2011 Fence on waterside prevents access to waterside slope.

jeto\_f\_20110923\_113.jpg

Levee Mile Report Line	4	
Start Levee Mile	0.47	
End Levee Mile	0.50	
Location	Water Side	
Category	Supplemental	
Item	DWR Erosion Survey	
Looking downstream of the site.		







SJR2011\_RD2031U01RM0.48\_1.jpg

\* Location LS: Land Side WS: Water Side CR: Crown \* Rating

A : Acceptable
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U : Unacceptable

PO : Partially Obstructing CO : Completely Obstructing W : Watch/Monitor N : Not Inspected, see Inspector Comment

## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.15	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	4	
Start Levee Mile	0.47	
End Levee Mile	0.50	
Location	Water Side	
Category	Supplemental	
Item	DWR Erosion Survey	
Looking downstream of the site. The irrigation outlet operating. Debris at the outlet visible		

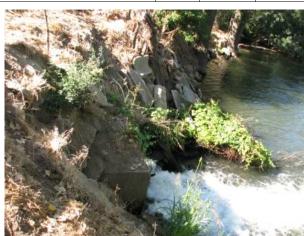
SJR2011\_RD2031U01RM0.48\_2.jpg

Levee Mile Report Line	4
Start Levee Mile	0.47
End Levee Mile	0.50
Location	Water Side
Category	Supplemental
Item	DWR Erosion Survey

View of the current condition of the levee slope just above the irrigation outlet.

SJR2011\_RD2031U01RM0.48\_3.jpg

Levee Mile Report Line	4	
Start Levee Mile	0.47	
End Levee Mile	0.50	
Location	Water Side	
Category	Supplemental	
Item	DWR Erosion Survey	
Downstream view of the site.		







SJR2011\_RD2031U01RM0.48\_4.jpg

\* Location LS: Land Side WS: Water Side CR: Crown \*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing CO : Completely Obstructing W : Watch/Monitor N : Not Inspected, see Inspector Comment

## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.15	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	5	
Start Levee Mile	0.52	
End Levee Mile	0.52	
Location	Water Side	
Category	Earthen Levee	
Item	Vegetation	
10/26/2011 Updated photo of waterside vegetation.		
jeto_f_20111104_513.jpg		

Levee Mile Report Line	6	
Start Levee Mile	0.55	
End Levee Mile	0.65	
Location	Land Side	
Category	Earthen Levee	
Item	Encroachments	
Fall 2009 photo of livestock pens and house on		

landside slope.

jeto_	f	201	10923	_119.jpg

Levee Mile Report Line	10	
Start Levee Mile	0.81	
End Levee Mile	0.81	
Location	Land Side	
Category	Earthen Levee	
Item	Encroachments	
05/10/2011 PVC pipe pieces are obstructing opening to drain pipe.		

jeto\_f\_20110923\_116.jpg







WS : Water Side CR : Crown

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U : Unacceptable

PO : Partially Obstructing CO : Completely Obstructing W : Watch/Monitor

N : Not Inspected, see Inspector Comment

## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.15	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	10			
Start Levee Mile	0.81			
End Levee Mile	0.81			
Location	Land Side			
Category	Earthen Levee			
Item	Encroachments			
10/26/2011 Updated photo of PVC pipe pieces obstructing drain pipe, issue remains from Spring 2011 inspection.				

jeto\_f\_20111104\_512.jpg

Levee Mile Report Line	12
Start Levee Mile	1.27
End Levee Mile	1.27
Location	Water Side
Category	Earthen Levee
Item	Encroachments

Irrigation intake pump and pipe.

jeto\_f\_20110923\_114.jpg

Levee Mile Report Line	14			
Start Levee Mile	1.58			
End Levee Mile	1.58			
Location	Land Side			
Category	Earthen Levee			
Item	Erosion / Bank Caving			
40/00/0044 A - ti				

10/26/2011 Active erosion into the levee prism around irrigation standpipe.

jeto\_f\_20111104\_511.jpg







* Location	*	Location	
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WS : Water Side CR : Crown

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M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing CO : Completely Obstructing W : Watch/Monitor

N : Not Inspected, see Inspector Comment

## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.15	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	15			
Start Levee Mile	1.60			
End Levee Mile	1.60			
Location	Water Side			
Category	Earthen Levee			
Item	Erosion / Bank Caving			
10/26/2011 Active erosion shown around irrigation inlet.				
jeto_f_20111104_510.jpg				

Levee Mile Report Line	16
Start Levee Mile	1.65
End Levee Mile	1.65
Location	Land Side
Category	Earthen Levee
Item	Erosion / Bank Caving

10/26/2011 Active erosion into levee prism around irrigation inlet.

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JCto_1_20111104_303.jpg				
Levee Mile Report Line	24			
Start Levee Mile	3.72			
End Levee Mile	3.72			
Location	Water Side			
Category	Earthen Levee			
Item	Encroachments			
Irrigation intake on waterside berm.				
jeto_f_20110923_115.jpg				







LS : Land Side

WS : Water Side CR : Crown

\*\* Rating

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
W : Watch/Monitor

N : Not Inspected, see Inspector Comment

## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Stanislaus River	Left	7.15	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	29
Start Levee Mile	4.50
End Levee Mile	4.50
Location	Water Side
Category	Earthen Levee
Item	Trim / Thin Trees
10/26/2011 Fallen limb o crown.	n waterside slope and
jeto_f_20111104_508.jpg	



### **Unit Cover Sheet**

### Fall 2011 Levee Inspection Results

## **Reclamation District No. 2031 Elliot**

	Water	way		Bank	Unit Miles		
	Unit No. 02 San	Joaquin River		Right	6.04		
	Spring (March - May)	Summer (June - August)	(September - November) Fall		Winter ber - February)		
Unit Maintenance Rating (Fall Only)			M				
Date of Inspection	5/10/2011 - 5/10/2011		10/26/2011 - 10/26/2011				
DWR Inspector	Jim Eto		Jim Eto				
Accompanied By	Mr. Bob Buckmaster RD 2031		Mr. Bob Buckmaster RD 2031				
	Billy Lyons						
Check one:							
project components conditions other that deficiencies identified.  During the current with project components maintenance and the following changes in the comment seemed.	identified in the attached Leven the results of our normal maded in the enclosed report.  winter (or summer) inspection period in the attached Levene corrections we have made to a flood project conditions.	ee Inspection Report by intenance and the corresponding of the correspon	e inspected the levee and assortium. We have found no change ections we have made to maint the inspected the levee and assortium. In addition to the results cies identified in the report, we of condition by: Start to End Lean, and description of the current.	ges in florenance ociated florenance have for have for evee Mile	ood project  ood  ormal  und the		
Comments							
information must also be s DWR with any additional s	One of the boxes above is to be checked by the Local Maintaining Agency (LMA). If the second box is checked, additional information must also be submitted. This Unit Cover Sheet should be signed and dated by the LMA Representative and returned to DWR with any additional sheets by September 30 (Summer Inspection) or March 31 (Winter Inspection). Please retain a copy for your records. Please mail all of this information to:  DWR Summer/Winter Inspection Reports  3310 El Camino Avenue, Suite 200  Sacramento, CA 95821-9000						
X Signature of LMA Repres	sentative		Date				

## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	6.04	10/26/2011 10/26/2011	Jim Eto

LMR	Levee	Mile			Loca	. ₽.		GPS Latitude/Longitude	Issue No.
No.	Start	End	Category	Item	Location	Rating	Action/Comment	Start End	Photo
1	0.22	0.22	Earthen Levee	Encroachments	LS	W	Pipe	37.658843 ° 37.658843 ° -121.234271 ° -121.234271 °	
2	0.63	0.63	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level. Inspector Comments: Tree limbs obstruct visibility of landside toe.	37.654585 ° 37.654585 ° -121.231719 ° -121.231719 °	
3	0.88	1.09	Earthen Levee	Seepage / Sandboils	LS	С	Inspector Comments: Seepage site observed	37.653208 ° 37.652044 ° -121.227438 ° -121.223991 °	
4	1.36	1.36	Earthen Levee	Encroachments	LS	СО	Buildings	37.648898 ° 37.648898 ° -121.221621 °	
5	1.45	1.45	Earthen Levee	Encroachments	LS	СО	Landscaping Inspector Comments: Wild rose bush on landside slope.	37.647708 ° 37.647708 ° -121.220873 ° -121.220873 °	
6	1.66	1.90	Earthen Levee	Seepage / Sandboils	LS	С	Inspector Comments: Seepage depth to several feet.	37.644813 ° 37.642056 ° -121.223507 °	
7	3.00	3.60	Earthen Levee	Trim / Thin Trees	LS	М	Trim trees to at least five feet above ground level. Inspector Comments: Obstructive trees and vegetation along highway are on the landside slope of the levee.	37.637626 ° 37.638301 ° -121.207191 ° -121.196465 °	
8	3.89	3.89	Earthen Levee	Vegetation	LS	М	Remove the wild growth other than native grasses from the levee slopes. Inspector Comments: Tall grass at toe should be removed for visibility.	37.637715 ° 37.637715 ° -121.191516 ° -121.191516 °	
9	4.23	4.23	Earthen Levee	Animal Control	LS	M	No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.  Inspector Comments: Burrows are already marked to take corrective action. Several burrows in this area. Fall 2011, burrows are still marked with old flags, burrows appear to still be active.	37.632974 ° 37.632974 ° -121.190745 ° -121.190745 °	
10	4.28	4.28	Earthen Levee	Animal Control	LS	М	No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.  Inspector Comments: Fall 2011 inspection, burrows are flagged, but appear to still be active,	37.632220 ° 37.632220 ° -121.190380 ° -121.190380 °	

LS	· I and	Side

WS : Water Side CR : Crown

A : Acceptable
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## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	6.04	10/26/2011 10/26/2011	Jim Eto

LMR 7	Levee		Category	Item	Location	Rating	Action/Comment	GPS Latitud	le/Longitude	Issue No.
No.	Start	End			ion	g		Start	End	Photo
11	4.33	4.37	Supplementa	DWR Erosion Survey	WS	W	Inspector Comments: 08/18/2011: No significant changes observed on the site. Dead trees and animal activities visible. The closest point of the erosion site to the levee toe is about 100 ft. 10/19/2010: There is active scouring occurring on the bank due to the nature of the flow and the lack of armor protection. There is also a fallen log immediately downstream of where the erosion has occurred and is protruding outward, possibly creating an eddy and scouring the bank. With the remaining 100-foot wide berm, the levee prism is not yet affected. However, the bank will continue to degrade, and eventually intrude into the levee prism if no protection is put in place. Erosion site is recommended for annual assessment and monitoring during flood events. [2011 Site ID:RD2031U02RM78.7]	37.631716 ° -121.189370 °	37.631716° -121.189370°	1 Y
12	4.75	4.75	Earthen Levee	Encroachments	WS	W	Pipe Inspector Comments: 14" pipe through the levee concrete headwall on landside, waterside is submerged ditch. No gate on landside. This does not threaten the structural integrity of the levee, but it does appear to allow for the free flow of water through the levee.	37.630835 ° -121.182411 °	37.630835 ° -121.182411 °	12 Y
13	5.33	5.33	Earthen Levee	Animal Control	LS	U	No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.  Inspector Comments: This is a significant burrow with 3-5 cubic feet of fresh material present, There is a matching burrow on the water side, also with fresh material.	37.630799 ° -121.171802 °	37.630799 ° -121.171802 °	13 Y
14	5.46	5.46	Earthen Levee	Animal Control	LS	М	No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.  Inspector Comments: Multiple burrows, some appear to be active, others inactive.	37.630800 ° -121.169596 °	37.630800 ° -121.169596 °	14 Y
15	5.54	5.54	Earthen Levee	Seepage / Sandboils	LS	U	Inspector Comments: 10/26/2011 Possible sand boil observed. Note that there is damage to the concrete channel directly across on the waterside of the levee from this issue. FIR filed for this issue, FIR no. 4422.	37.630797 ° -121.168204 °	37.630797 ° -121.168204 °	15 Y
16	5.65	5.65	Earthen Levee	Erosion / Bank Caving	LS	U	Inspector Comments: Active erosions occurring. Appears to be a hole behind the levee penetrating into the prism. Cracks observed above the hole on the levee slope. The waterside of the levee is a concrete lined MID irrigation canal.	37.630794 ° -121.166179 °	37.630794 ° -121.166179 °	16 Y

LS : Land Side	
WS : Water Side	
CD · Crown	

\*\* Rating

M : Minimally Acceptable
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PO : Partially Obstructing
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W : Watch/Monitor

N : Not Inspected, see Inspector Comment

## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	6.04	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	1			
Start Levee Mile	0.22			
End Levee Mile	0.22			
Location	Land Side			
Category	Earthen Levee			
Item	Encroachments			
Drainage discharge pumps and housing on steep waterside slope.				

jeto\_f\_20110923\_126.jpg

Levee Mile Report Line	1
Start Levee Mile	0.22
End Levee Mile	0.22
Location	Land Side
Category	Earthen Levee
Item	Encroachments

10/26/2011 Flap gates on landside.

jeto\_f\_20111107\_514.jpg

Levee Mile Report Line	2
Start Levee Mile	0.63
End Levee Mile	0.63
Location	Land Side
Category	Earthen Levee
Item	Trim / Thin Trees

10/26/2011 Trees on landside need to be trimmed up 5' above the ground to allow for visibility of the landside slope and toe.

jeto\_f\_20111107\_515.jpg







Location

LS : Land Side

WS : Water Side CR : Crown

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## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	6.04	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	4
Start Levee Mile	1.36
End Levee Mile	1.36
Location	Land Side
Category	Earthen Levee
Item	Encroachments
Small structure on levee	slope.

jeto\_f\_20110923\_127.jpg

Levee Mile Report Line	5
Start Levee Mile	1.45
End Levee Mile	1.45
Location	Land Side
Category	Earthen Levee
Item	Encroachments
Wild rose on loves slane	

Wild rose on levee slope.

jeto\_f\_20110923\_129.jpg

Levee Mile Report Line	8	
Start Levee Mile	3.89	
End Levee Mile	3.89	
Location	Land Side	
Category	Earthen Levee	
Item	Vegetation	
10/26/2011 Vegetation on landside obstructs visibility of the landside slope and toe.		

jeto\_f\_20111107\_516.jpg







* Location
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## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	6.04	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	9	
Start Levee Mile	4.23	
End Levee Mile	4.23	
Location	Land Side	
Category	Earthen Levee	
Item	Animal Control	
10/26/2011 Typical hurrow in area, several		

10/26/2011 Typical, burrow in area, several burrows at this location, many of them were flagged prior to the Spring 2011 inspection.

jeto\_f\_20111107\_517.jpg

Levee Mile Report Line	10
Start Levee Mile	4.28
End Levee Mile	4.28
Location	Land Side
Category	Earthen Levee
Item	Animal Control

10/26/2011 Burrows that appear to be active, cleaned corn cob at entrance of one burrow.

jeto\_f\_20111107\_518.jpg

11
4.33
4.37
Water Side
Supplemental
DWR Erosion Survey

From the berm looking upstream. This the closest point to the levee toe.

SJR2011\_RD2031U02RM78.7\_1.jpg







* Location	
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LS : Land Side

WS : Water Side CR : Crown \*\* Rating

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PO:

PO : Partially Obstructing CO : Completely Obstructing W : Watch/Monitor N : Not Inspected, see Inspector Comment

## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	6.04	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	11		
Start Levee Mile	4.33		
End Levee Mile	4.37		
Location	Water Side		
Category Supplemental			
Item DWR Erosion Survey			
Unstream view of adjacent bank affected by			

erosion. The loose sand visible on the site.

SJR2011 RD2031U02RM78.7 2.jpg

Levee Mile Report Line	11
Start Levee Mile	4.33
End Levee Mile	4.37
Location	Water Side
Category	Supplemental
Item	DWR Erosion Survey

Looking downstream. The starting point of the protection visible.

SJR2011\_RD2031U02RM78.7\_3.jpg

Levee Mile Report Line	11
Start Levee Mile	4.33
End Levee Mile	4.37
Location	Water Side
Category	Supplemental
Item	DWR Erosion Survey

A close look of the erosion. The loose sandy material visible.

SJR2011\_RD2031U02RM78.7\_4.jpg







*	Location
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## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	6.04	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	12		
Start Levee Mile	4.75		
End Levee Mile	4.75		
Location	Land Side		
Category Earthen Levee			
Item Encroachments			
10/26/2011 Photo shows landside of 14" PVC			

pipe through levee. No flap gate or closure device observed.

jeto\_f\_20111107\_519.jpg

Levee Mile Report Line	13
Start Levee Mile	5.33
End Levee Mile	5.33
Location	Land Side
Category	Earthen Levee
Item	Animal Control

10/26/2011 Landside photo of large burrow, 3-5 cubic ft of material shown.

jeto\_f\_20111107\_520.jpg

13
5.33
5.33
Land Side
Earthen Levee
Animal Control

10/26/2011 Waterside burrow, located almost directly across from large burrow in previous photo. Note, material from burrow is being wetted by the canal water.

jeto\_f\_20111107\_521.jpg







Location	*	Location
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## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	6.04	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	13
Start Levee Mile	5.33
End Levee Mile	5.33
Location	Land Side
Category	Earthen Levee
Item	Animal Control

10/26/2011 Photo taken from location of waterside burrow to show relationship to landside burrow, which can be noted by fresh material seen over the levee crown approximately 2' to the left in this photo.

jeto\_f\_20111107\_522.jpg

Start Levee Mile 5.46 End Levee Mile 5.46 Location Land Side Category Earthen Levee  Item Animal Control	Levee Mile Report Line	14
Location Land Side Category Earthen Levee	Start Levee Mile	5.46
Category Earthen Levee	End Levee Mile	5.46
	Location	Land Side
Item Animal Control	Category	Earthen Levee
	Item	Animal Control

10/26/2011 Multiple burrows shown on the landside.

jeto\_f\_20111107\_523.jpg

Levee Mile Report Line	15	
Start Levee Mile	5.54	
End Levee Mile	5.54	
Location	Land Side	
Category	Earthen Levee	
Item	Seepage / Sandboils	

10/26/2011 First of three photos showing possible sand boil, appears to be a deposition of material as evidenced by the shadows on the upper side of the boil.

jeto\_f\_20111107\_524.jpg







*	Location
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## Levee Inspection Report By Mile - Fall 2011

## **Reclamation District No. 2031 Elliot**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 San Joaquin River	Right	6.04	10/26/2011 10/26/2011	Jim Eto

Levee Mile Report Line	15		
Start Levee Mile	5.54		
End Levee Mile	5.54		
Location	Land Side		
Category	Earthen Levee		
Item	Seepage / Sandboils		
10/26/2011 Photo shows location of boil relative to the levee.			

15		
5.54		
5.54		
Land Side		
Category Earthen Levee		
Seepage / Sandboils		

10/26/2011 This concrete damage is located directly across the levee crown from the boil location.

jeto\_f\_20111107\_526.jpg

jeto\_f\_20111107\_525.jpg

16		
5.65		
5.65		
Land Side		
Earthen Levee		
Erosion / Bank Caving		

10/23/2011 Erosion located on the landside of the levee. Cracking above the hole in the levee slope and hole extends into the levee prism.

jeto\_f\_20111107\_527.jpg







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